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10/829,624	04/22/2004	Eric L. Barsness	ROC920030407US1	7304

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IBM CORPORATION, INTELLECTUAL PROPERTY LAW		COLAN, GIOVANNA B
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/829,624	BARSNESS ET AL.
	Examiner	Art Unit	
	Giovanna Colan	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 July 2007</u>.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-44</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-44</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is issued in response to the Amendment filed on 07/06/2007.

2.   Claims 1, 17, 22, 38, 43, and 44 were amended. No claims were canceled. No claims were added.

3.   This action is made Final.

4.   Claims 1 –44 are pending in this application.

5.   Applicant's arguments with respect to amended claims 1, 17, 22, 38, 43, and 44 have been considered but are moot in view of the new ground(s) of rejection.

6.   Examiner makes note that the current amended limitation of claim 38 recites "determining a degree of correlation..." in line 20. However, this newly amended limitation "determining" as opposed to previously limitation "computing" (as recited in previous amendment dated 01/18/2007) has not been underlined to follow the format of amendments.

Specification

7.   The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation "to create a third column that..." recited in claims 1, 22, and 43 is not supported in the specification of the disclosure.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

10.   Claims 1 – 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sandler et al. (Sandler hereinafter) (US Patent No. 2003/0217033 A1, filed: May 17,

2002) in view of Kaufman et al. (Kaufman hereinafter) (US 2004/0073565 A1).

Regarding Claims 1, and 22, Sandler discloses computer readable storage medium containing a program which, when executed, performs a process for identifying correlated columns from database tables, the process comprising:

determining correlation attributes for a first column and a second column from one or more database tables, the correlation attributes describing for each column at least one of the column and content of the column (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12; wherein the step of mapping which includes all of the values in field K1 1804 that have the same values in field F1 1806 corresponds to the step of determining the correlation attributes as claimed; wherein values F1 corresponds to the first column claimed; and wherein values in K1 corresponds to the second column claimed; Sandler);

comparing the correlation attributes from the first and second column (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12, all of the values in field K1 1804 that have the same values in field F1 1806, Sandler);

identifying similarities between the first and second column on the basis of the comparison (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 8 – 15, all of the values in field K1 1804 that have the same values in field F1 1806, Sandler[1]);

on the basis of the identified similarities, determining whether the first and second column are correlated (Fig. 18A, Page 17, [0235], lines 8 – 15, "To perform this mapping, all of the values in field K1 1804 **that have the same values** in field F1 1806

must be combined..."; wherein "the same values" corresponds to the identified

similarities claimed; Sandler); and

upon determining the first and second columns are correlated, merging the first

and second columns to create a third column (Fig. 18A, Page 17, [0235], lines 8 – 15,

"To perform this mapping, all of the values in field K1 1804 **that have the same values**

in field F1 1806 must be combined..."; wherein "the same values" corresponds to the

identified similarities claimed; Sandler).

However, Sandler does not explicitly disclose that the third column contains each

data value stored in the first and second columns. On the other hand, Kaufman

discloses merging the first and second columns to create a third column that contains

each data value stored in the first and second column (Fig. 5B, wherein the column

"SECURITY_GROUP_USER" corresponds to the first column claimed, the column

"PEOPLE" corresponds to the second column claimed, and wherein the "USER" column

corresponds to the third column claimed, also note that "USERS" column contains each

data value stored in the first and second column, such as, "USERS_KEY" and

"PEOPLE_KEY"; Page 8 – 9, [0134] – [0135], and [0139], Kaufman).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the Kaufman's teachings to the system of Sandler.

Skilled artisan would have been motivated to do so, as suggested by Kaufman (Page 1,

[0011], Kaufman), to provide a comprehensive application through which the back-end

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[1] Wherein the step of mapping all the values in **field K1 1804 that have the same values in field F1**

can be operated, and through which all conventional database activities-searching,

listing, adding, editing0can be supported, across all base-tables comprising the schema.

Furthermore, the combination of Snadler in view of Kaufman discloses:

storing the third column in the database (Page 17, [0235], lines 12 – 15, Sandler;

and Page 8, [0136], Kaufman).

Regarding Claims 2, and 23, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein identifying the similarities comprises:

determining a correlation value indicating a degree of correlation between the

first and the second column (Page 2, [0018], lines 6 – 9, Sandler); and

determining whether the correlation value exceeds a predetermined threshold

(Page 2, [0018], lines 6 – 9; is above a predetermined threshold; Sandler).

Regarding Claims 3, and 24, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the process further comprises:

if it is determined that the first and second column are correlated (Fig. 18A, items

1806, and 1804, Page 17, [0235], lines 7 – 12, Sandler), displaying an indication to a

user that the first and second column can be merged (Page 1, and 2, [0008], and

[0015], lines 1 – 5, and 4 – 7; respectively, Sandler); and

1806 corresponds to the step of identifying the similarities between the first and second column as
claimed.

in response to user input, merging the first and second column into a single

column (Page 10, [0132], lines 2 – 8, Sandler).

Regarding Claims 4, and 25, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the first column is a column of a first

database table and the second column is a column of a second database table, the

process further comprising:

determining correlation attributes for N columns from the first database table and

M columns from the second database table, where N and M are integers (Fig. 18A,

items 1806, and 1804, Page 17, [0235], lines 7 – 12, Sandler);

comparing the correlation attributes from each of the N columns with the

correlation attributes from each of the M columns to identify similarities between the N

and M columns (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12, all of the

values in field K1 1804 that have the same values in field F1 1806, Sandler); and

on the basis of the identified similarities, determining whether one or more of the

N and M columns are correlated (Fig. 18A, Page 17, [0235], lines 12 – 15, Sandler).

Regarding Claims 5, and 26, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the process further comprises:

merging each of the one or more of the N and M columns determined to be

correlated (Fig. 18A, items 1806, 1804, 1802, and 1810, Page 17, [0235], lines 7 – 15;

all of the values in field K1 1804 that have the same values in field F1 1806 must be

combined to **provide a value for field F 1810 in table TARGET 1802**, Sandler).

Regarding Claims 6, and 27, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the process further comprises:

determining, from the one or more database tables, metadata describing

characteristics of each column (Page 4, [0056], lines 3 – 10, Sandler); and

wherein the correlation attributes are determined on the basis of the determined

metadata (Page 18, [0251], lines 3 – 10, Sandler).

Regarding Claims 7, and 28, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the determined metadata describes for

each column an attribute of a data value in the column (Fig. 18A, items 1806, and 1804,

Page 17, [0235], lines 8 – 15, all of the values in field K1 1804 that have the same

values in field F1 1806, Sandler).

Regarding Claims 8, and 29, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the determined metadata describes for

each column at least one of:

(i) a label;

(ii) a comment;

(iii) a constraint;

(iv) a trigger;

(v) a name (Page 9, [0116], lines 1 – 3, Sandler);

(vi) a data type (Page 4, [0057], lines 10 – 12; data type, Sandler); and

(vii) a column length (Page 4, [0057], lines 10 – 12; length of the columns,

Sandler).

Regarding Claims 9, and 30, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the process further comprises:

determining, from the one or more database tables, statistical parameters

associated with each of the columns (Page 4, [0059], lines 1 – 5, Sandler); and

wherein the correlation attributes are determined on the basis of the determined

statistical parameters (Page 4, [0059], lines 5 – 9, Sandler).

Regarding Claims 10, and 31, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the determined statistical parameters

describe for each column at least one of:

(i) a minimum value (Page 4, [0059], lines 1 – 5; minimum; Sandler);

(ii) a maximum value (Page 4, [0059], lines 1 – 5; maximum; Sandler);

(iii) an average value; and

(iv) a range of values (Page 4, [0059], lines 1 – 5; … maintains a range indices

for each key field column … ; Sandler).

Regarding Claims 11, and 32, the combination of Snadler in view of Kaufman discloses a computer readable medium, wherein the process further comprises:

determining, from the one or more database tables, ontological properties describing cognitive qualities associated with each column (Page 8, [0110], lines 3 – 9, Sandler); and

wherein the correlation attributes are determined on the basis of the determined ontological properties (Page 8, [0110], lines 3 – 9, Sandler).

Regarding Claims 12, and 33, the combination of Snadler in view of Kaufman discloses a computer readable medium, wherein the determined ontological properties describe for each column at least one of:

(i) a synonym (Page 8, [0110], lines 3 – 9; synonym table, Sandler);

(ii) a parent node (Page 6, [0073], lines 9 – 14; Sandler); and

(iii) an ancestor node (Page 6, [0073], lines 9 – 14; Sandler).

Regarding Claims 13, and 34, the combination of Snadler in view of Kaufman discloses a computer readable medium, wherein the process further comprises:

determining, from the one or more database tables, metadata describing the ontological properties (Page 8, [0110], lines 3 – 9, Sandler).

Regarding Claims 14, and 35, the combination of Snadler in view of Kaufman discloses a computer readable medium, wherein the process further comprises:

determining, from the one or more database tables, measurement units
associated with each column (Page 4, [0059], lines 1 – 5, Sandler); and

wherein the correlation attributes are determined on the basis of the determined
measurement units (Page 4, [0059], lines 5 – 9, Sandler).

Regarding Claims 15, and 36, the combination of Snadler in view of Kaufman
discloses a computer readable medium, wherein the process further comprises:

determining, from the one or more database tables, metadata describing the
measurement units (Page 4, [0059], lines 1 – 5, Sandler).

Regarding Claims 16, and 37, the combination of Snadler in view of Kaufman
discloses a computer readable medium, wherein identifying the similarities comprises:

determining whether the first and second column are associated with similar
measurement units (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12, all of
the values in field K1 1804 that have the same values in field F1 1806, Sandler).

Regarding Claims 17, and 38, the combination of Snadler in view of Kaufman
discloses a computer readable storage medium containing a program which, when
executed, performs a process for identifying correlated columns from database tables,
the process comprising:

determining metadata for at least two columns from one or more database

tables, the metadata describing characteristics of each column (Page 4, [0056], lines 3

– 10, Sandler);

analyzing content from the at least two columns from the one or more database

tables (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12, all of the values

in field K1 1804 that have the same values in field F1 1806, Sandler); and

determining a degree of correlation between the at least two columns using the

determined metadata and the analyzed content (Page 17 and 18, [0235] and [0251],

lines 8 – 15 and 3 – 10; respectively, wherein the step of mapping by combining the

same values in fields corresponds to the step of determining the degree of correlation

as claimed; wherein the "many-to-one" corresponds to the metadata claimed; wherein

the values in the fields corresponds to the analyzed content claimed; and wherein the

mapping after combining the values, for example: value of the field F 1802, corresponds

to the degree of correlation claimed; Sandler); and

storing the value representing the degree of correlation in the database (Page

17, [0235], lines 12 – 15, the value of the field F 1810 will be the sum of all of the

elements in the field K1 1804 in table T1 1800 that have "A" as the value of field F1

1806).

Regarding Claims 18, and 39, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein determining the degree of correlation

comprises:

assigning a first correlation value to the determined metadata (Page 9, [0122],

line 1; one column is chosen as a filed of values sources; Sandler);

assigning a second correlation value to the analyzed content, wherein the first

and second correlation values are different (Page 9, [0123], and [0124], lines 1 – 6, and

1 – 2; respectively; Sandler); and

calculating a total correlation value on the basis of the first and second

correlation values (Page 9, [0125], lines 1 – 4; ... distinct values in the column gets

added to the result of (3); Sandler).

Regarding Claims 19, and 40, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the process further comprises:

merging the at least two columns if the total correlation value exceeds a

predetermined threshold value (Page 2, [0018], lines 6 – 9; is above a predetermined

threshold; Sandler).

Regarding Claims 20, and 41, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein analyzing the content comprises:

determining statistical parameters from the content of each column (Page 4,

[0059], lines 1 – 5, Sandler).

Regarding Claims 21, and 42, the combination of Snadler in view of Kaufman

discloses a computer readable medium, wherein the process further comprises:

merging the first and the at least one second column if it is determined that the

first and at least one second column are correlated (Fig. 18A, items 1806, 1804, 1802,

and 1810, Page 17, [0235], lines 7 – 15; all of the values in field K1 1804 that have the

same values in field F1 1806 must be **combined to provide a value for field F 1810 in**

table TARGET 1802, Sandler).

Regarding Claim 43, the combination of Snadler in view of Kaufman discloses a

data processing system, comprising a processor:

at least one database having one or more database tables (Page 2, [0016], lines

1 – 4, Sandler); and

a correlation manager for identifying correlated columns from the one or more

database tables (Page 6, [0082], lines 3 – 6, Sandler), the correlation manager which,

when executed by the processor, is configured for:

determining correlation attributes for a first column and a second column

from the one or more database tables, the correlation attributes describing for

each column at least one of the column and content of the column (Fig. 18A,

items 1806, and 1804, Page 17, [0235], lines 7 – 12; wherein the step of

mapping which includes all of the values in field K1 1804 that have the same

values in field F1 1806 corresponds to the step of determining the correlation

attributes as claimed; wherein values F1 corresponds to the first column claimed;

and wherein values in K1 corresponds to the second column claimed; Sandler);

comparing the correlation attributes from the first and second column (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12, all of the values in field K1 1804 that have the same values in field F1 1806, Sandler);

identifying similarities between the first and second column on the basis of the comparison (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 8 – 15, all of the values in field K1 1804 that have the same values in field F1 1806, Sandler[2]);

on the basis of the identified similarities, determining whether the first and second column are correlated (Fig. 18A, Page 17, [0235], lines 12 – 15, "To perform this mapping, all of the values in field K1 1804 **that have the same values** in field F1 1806 must be combined…"; wherein "the same values" corresponds to the identified similarities claimed; Sandler);

upon determining the first and second columns are correlated, merging the first and second columns to create a third column (Fig. 18A, Page 17, [0235], lines 8 – 15, "To perform this mapping, all of the values in field K1 1804 **that have the same values** in field F1 1806 must be combined…"; wherein "the same values" corresponds to the identified similarities claimed; Sandler) that contains each data value stored in the first and second column (Fig. 5B, wherein the column "SECURITY_GROUP_USER" corresponds to the first column claimed, the column "PEOPLE" corresponds to the second column claimed, and wherein the "USER" column corresponds to the third column claimed, also note that

"USERS" column contains each data value stored in the first and second column,

such as, "USERS_KEY" and "PEOPLE_KEY"; Page 8 – 9, [0134] – [0135], and

[0139], Kaufman); and

storing the third column in the database (Page 17, [0235], lines 12 – 15,

Sandler; and Page 8, [0136], Kaufman).

Regarding Claim 44, the combination of Snadler in view of Kaufman discloses a

data processing system comprising a processor;

at least one database having one or more database tables (Page 2, [0016], lines

1 – 4, Sandler); and

a correlation manager for identifying correlated columns from the one or more

database tables (Page 6, [0082], lines 3 – 6, Sandler), the correlation manager which,

when executed by the processor, is configured for:

determining metadata for at least two columns from the one or more

database tables, the metadata describing characteristics of each column (Page

4, [0056], lines 3 – 10, Sandler);

analyzing content from the at least two columns from the one or more

database tables (Fig. 18A, items 1806, and 1804, Page 17, [0235], lines 7 – 12,

all of the values in field K1 1804 that have the same values in field F1 1806,

Sandler); and

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[2] Wherein the step of mapping all the values in **field K1 1804 that have the same values in field F1
1806** corresponds to the step of identifying the similarities between the first and second column as
claimed.

determining a degree of correlation between the at least two columns using the determined metadata and the analyzed content (Page 17 and 18, [0235] and [0251], lines 8 – 15 and 3 – 10; respectively, wherein the step of mapping by combining the same values in fields corresponds to the step of determining the degree of correlation as claimed; wherein the "many-to-one" corresponds to the metadata claimed; wherein the values in the fields corresponds to the analyzed content claimed; and wherein the mapping after combining the values, for example: value of the field F 1802, corresponds to the degree of correlation claimed; Sandler); and

storing the value representing the degree of correlation in the database (Page 17, [0235], lines 12 – 15, the value of the field F 1810 will be the sum of all of the elements in the field K1 1804 in table T1 1800 that have "A" as the value of field F1 1806).

Response to Arguments

1.   In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "a correlation value **between two database columns** and **comparing that value to...**", "predetermined threshold for a correlation value", "using the metadata in order **to compute a value** corresponding to the degree of correlation between two columns") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2.   Applicant argues that; "the cited passage makes no use of a correlation value and furthermore, does not use metadata or analyzed content to computer such a correlation value"

Examiner respectfully disagrees. First, it is noted that the features upon which applicant relies (i.e., "...compute such a correlation value...") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Second, the applied art does disclose the limitation determining a degree of correlation between the at least two columns using the determined metadata and the analyzed content (See rejection of claims 17, 38, and 48 in this Office Action above).

Conclusion

1.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

2.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Prior Art Made Of Record

1.   Sandler et al. (US Patent App. Pub. No. 2003/0217033 A1, filed: May 17, 2002).

2.   Suzuki et al. (US Patent No. 6,044,383).

Points Of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna Colan whose telephone number is (571) 272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan
Examiner
Art Unit 2162
September 10, 2007

JOHN BREENE
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